DOCUMENT RESUME

ED 276 290 FL 016 259

AUTHOR Tushyeh, Hanna Y.
TITLE Transfer and Related Strategies in the Acquisition of English Relativization by Adult Arab ESL Learners.
PUB DATE Sep 85
NOTE 34p.; Paper presented at the Annual Meeting of the Japanese Association of Language Teachers (11th, Kyoto, Japan, September 14-16, 1985).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Adult Learning; *Arabs; *English (Second Language); Error Patterns; Grammatical Acceptability; *Inferences; Interlanguage; Language Processing; Multiple Choice Tests; *Second Language Learning; Sentence Combining; *Transfer of Training; Translation; Written Language
IDENTIFIERS *Relative Clauses

ABSTRACT

The role of language transfer in the acquisition of English as a second language as indicated in the production of relative clauses was examined. Analysis of adult Arab students' written responses to a variety of test types revealed that (1) language transfer is a significant factor in second language acquisition; (2) there is a distinction between inferencing transfer and non-inferencing transfer; and (3) in addition to strategies already known in the field such as transfer, simplification, and overgeneralization, the Arab students employ various perceptual and production strategies. The responses of these learners indicate that both interlingual and intralingual errors are found in their interlanguage. As a result, an adequate account of the process of second language acquisition has to include a multifactor approach in which the first and second languages, transfer, other production and perceptual strategies, and language universals play complementary roles. (Author/MSE)

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Transfer and Related Strategies in the Acquisitition of English Relativization by Adult Arab ESL Learners

A Paper Presented at

The JALT 11th Annual International Conference

Kyoto, Japan, September 14-16, 1985

by

Dr. Hanna Y. Tushyeh
Assistant Professor
Department of English
An-Najah National University, Nablus

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ABSTRACT

The focus of this study is the role of language transfer in second language acquisition. A sample of written production of English relative clauses by 102 Arab ESL learners is analyzed. The data collection includes the responses of the subjects on a translation test, a sentence combining task, a grammaticality judgment test, and a multiple choice test. In addition, informal interviews were conducted after administering the tests.

The results of this study indicate that (1) language transfer is a significant factor in second language acquisition; (2) there is a distinction between inferencing transfer and non-inferencing transfer; and (3) in addition to strategies already known in the field such as transfer, simplification, and overgeneralization, the Arab students employ various perceptual and production strategies.

The responses of these Arab ESL learners indicate that both interlingual and intralingual errors are found in their interlanguage. Finally, the results show that an adequate account of the process of second language acquisition has to include a multifactor approach in which L1, L2, transfer, and other production and perceptual strategies and language universals play complementary roles.

THE ACQUISITION OF ENGLISH RELATIVE CLAUSES BY ADULT ARAB LEARNERS

INTRODUCTION

The focus of research in second language acquisition in recent years has shifted from a teaching perspective to an emphasis on learning. The processes through which a second language is learned as well as the learner's production of the target language have been under close scrutiny. The learner is viewed as an active participant engaged in a creative construction process formulating and testing rules and hypotheses and employing various rules and strategies in understanding and producing utterances in the target language. (cf. Corder, 1967; Selinker, 1969; Nemser, 1971; and Dulay and Burt, 1974).

While there is an abundance of contrastive analysis and error analysis studies dealing with the acquisition of phonological and morphological components of English by learners from many different language backgrounds, there are, relatively speaking, few studies that are totally devoted to the area of syntax.

Within the area of syntax, relativization is an important and rich structure. In the literature, the acquisition of English relativization by Arab ESL learners

has not received a thorough investigation (cf. Fox, 1970; Schachter, 1974; Scott and Tucker, 1974; Schachter et al., 1976; Ioup and Kruse, 1977; and Gass, 1979). Many questions remain to be answered satisfactorily in these studies. There is a controversy among these researchers about the role of language transfer. The nature of transfer and other strategies is not adequately treated.

There are many reasons that motivate a comprehensive study of the acquisition of English relativization by Arab ESL learners. Among the research questions that remain to be answered satisfactorily are the problems that Arab ESL learners encounter in the acquisition of English relativization. On the basis of previous studies and personal experience, some of these problems include the appearance of the resumptive pronoun, relative pronoun, deletion, selection and morphology, and the lack of distinction between restrictive and nonrestrictive relative clauses in English.

In this study, a sample of written production of English relative clauses by Arab ESL learners from the elementary, intermediate, and advanced ESL levels is analyzed. Problematic areas in English relativization are isolated and identified. Errors are quantified in terms of percentages of occurrence so as to determine the

influence of interlingual and intralingual factors. Finally, the role and nature of language transfer and other perceptual and production strategies involved in the acquisition of English relativization by Arab ESL learners are investigated more thoroughly.

RESEARCH DESIGN AND METHODOLOGY

The Four Tests

Following Adams (1978), who recommends the use of multiple measures in data elicitation in second language acquisition research, four types of data elicitation techniques were used in this study in order to elicit and analyze the written English output of Arab ESL learners. These included a translation test, a grammaticality judgment task, a sentence combining test, and a multiple choice test.

The translation test involved the translation of twelve sentences from Modern Standard Arabic into English. These sentences represented relativization on the six positions of the Noun Phrase Accessibility Hierarchy of Keenan and Comrie (1977). The grammaticality judgment task consisted of 24 English sentences all of which, with the exception of 3 sentences contained a relative clause malformation. In the sentence combining test, the Arab ESL learners were instructed to combine twelve pairs of

English sentences so as to make one sentence out of each pair. In the fourth task, the multiple choice test, the subjects were presented with 12 sentences each containing a relative clause with a missing element. The subjects were instructed to complete the sentences by choosing the correct answer from a list of three alternatives.

Implementation of the study

One hundred and two Arab ESL learners participated in this study. These 102 learners were distibuted according to the institution they studied at as follows:

1. The University of Texas at Austin Intensive English Program. (37)
2. English 306Q: The University of Texas at Austin Department of English. (18)
3. The Wilton Language Center, Central Texas College, Killeen, Texas. (28)
4. St. Edward's University, Austin, Texas. (19)

These Arab ESL learners had already completed their secondary education in their home countries. However, their English language proficiency as represented by their TOEFL scores did not qualify them to enroll in regular college courses. Consequently, they were studying intensive English at English language institutions and intensive English programs. Upon the successful completion of two, three,or more semesters of intensive English, depending on their

English language proficiency and the achievement of a score of 550 or more on the TOEFL, these learners enter American colleges and universities.

The directors of the English language programs at the above-mentioned institutions were contacted to secure the participation of their Arab ESL learners in this study. A letter explaining the nature and purpose of this study together with a sample copy of the questionnaire for obtaining basic information about the subjects and a copy of the four tests were sent to these directors. After obtaining the approval of the directors, the questionnaire and the four tests were administered with the help of English language instructors at these institutions in two separate sessions. In both sessions, the subjects were told not to worry about grammatical errors or spelling mistakes. They were also told to answer all the items in the four tests.

The Informal Interviews

The questionnaires and the four tests were collected, and an initial error analysis was performed on the corpus. Later, informal interviews were conducted with small groups of Arab ESL learners. The aim of these interviews was to gain insights about strategies used by the subjects when they acquire English relativization. This is in line with the arguments of Jordens (1977), Tarone (1977), Kellermam (1977; 1979), and Sharwood-Smith (1979) who call for

"participant observation" in order to know what the learners intend in their linguistic production in the second language.

The atmosphere in these interviews were informal and friendly. The subjects were asked some questions about their performance in the tests. The researcher encountered some problems in conducting these informal interviews. In some cases, there was a time lapse between taking the tests and conducting the interviews. In addition, some subjects, particularly those who came from elementary levels, were uncertain about some questions in the interviews. As a result, the researcher had to assist these subjects in eliciting metalinguistic explanations about their performance. The subjects' responses in the informal interviews were recorded by the researcher. Later, these responses and comments were analyzed and generalizations about the subjects' responses were made. These generalizations are presented in connection with the results of the four tests in the following section.

RESULTS AND DISCUSSION

After collecting the data, an error analysis was performed on the corpus. The interlanguage of the subjects as manifested in their English production in the four tests was analyzed. The researcher adopted the criteria proposed by Abbott (1980) for the well-formedness of relative clauses.

Any deviation from the above criteria was considered erroneous. The data from the error analysis are given in Tables 1-7, Appendix A. As can be seen from these tables, the majority of the Arab learners' errors involved the appearance of the resumptive pronoun in all six relativizable positions of the Noun Phrase Accessibility Hierarchy of Keenan and Comrie (1977). The appearance of the resumptive pronoun in these positions is apparently a case of language transfer from the students' native language, Arabic. The question of whether transfer comes from Modern Standard Arabic or colloquial Arabic is irrelevant here because in both Modern Standard Arabic and colloquial dialects of Arabic, the resumptive pronoun occurs in the same type of structure. The nature and role of language transfer as it pertains to the appearance of the resumptive pronoun is discussed below.

Language Transfer

The most frequent error in the production of English relative clauses in all four tests employed in this study was the appearance of the resumptive pronoun in relativized site. This finding corroborates the findings of Schachter (1974), Schachter et al. (1976), Ioup and Kruse (1977), Scott and Tucker.(1974), and Gass (1979) that Arab ESL learners use the resumptive pronoun in English relativization. This study also lends support to the Noun Phrase Accessibility

Hierarchy of Keenan and Comrie (1977), who indicate that lower positions on the Hierarchy are more difficult to relativize than higher positions. That this was the case in this study too can be seen in Tables 1-4, Appendix A, where Arab ESL learners made more errors in the last three positions of the Hierarchy than in the higher positions.

In addition to the frequent use of the resumptive pronoun, other interlingual errors included relative pronoun omission, preposition omission, and the use of possessive pronouns with the antecedent. Relative pronoun omission was reported in other studies (cf. Scott and Tucker, 1974; Schachter et al., 1976; and Gass, 1979). It is attributed to interference from the native language since in Arabic there are no relative pronouns if the antecedent is indefinite. Examples from the corpus are given below:

(1) *I saw a man was looking for you.

(2) *A man bought the car is rich.

(3) *I got a friend speaks Spanish.

Preposition omission in the indirect object position, and the use of possessives with the antecedent are also caused by interference from Arabic since there are no prepositions in the indirect object position and no constraints on the use of possessives with the antecedent in Arabic. Both error types are illustrated below:

Preposition Omission

(4) *The girls who I gave the books returned to school.

(5) *I saw the girl who I sent a letter.

Use of the Possessive Pronoun with the Antecedent

(6) *His house which he built is large.

Generally speaking, the extensive use of the resumptive pronoun in English relativization by Arab ESL learners appears to be a case of language transfer from the learners' native language, Arabic, to the target language, English.

Language transfer seems to operate on two levels: the cognitive level and the automatization level. On the cognitive level, the learner uses previous knowledge, i.e., the native language, for the assimilation of new language items, i.e., the target language, which can result in facilitative effects depending on the similarities between the native language and the target language, or inhibiting effects if the native language structure and lack of knowledge of the target language structure lead to wrong assimilation of the target language elements. On the level of automatization, transfer occurs if the structures are similar for the native language and the target language. This view of language transfer operating on two levels resembles the conception of transfer given by Kellerman (1977) as involving two stages: projection and conversion.

The transfer of the resumptive pronoun from Arabic to English relativization by Arab ESL learners represents one type of language transfer. This type of language transfer is easy for the researcher to perceive because it is more or less direct transfer. This also implies that the learner must consider the native language and the target language as sufficiently similar for the transfer to be successful. This type of direct, interlingual transfer is here called inferencing transfer because the learner makes use of prior knowledge and experience in order to form hypotheses about the target language by applying prior knowledge and experience to the target language intake. There is also another type of transfer which is not as easily perceived by the researcher as inferencing transfer. This type of transfer is indirect and intralingual in which the learner makes use of already available interlanguage knowledge. This type of transfer which is due to interference from the target language itself can be called non-inferencing transfer. An example of errors caused by non-inferencing transfer is the lack of distinction between restrictive and non-restrictive relative clauses in the interlanguage of the Arab ESL learners in this study. This distinction is clearcut in English (cf. Quirk et al., 1972: 857-871) but not in Arabic.

As such, non-inferencing transfer of grammatical features seems to be conditioned by two factors: (a) simplification of the target language structure, and (b) a possible

failure to distinguish between two surface structures in the target language when the native language has only one surface structure. Thus, transfer appears to be of two types: direct, interlingual, inferencing trnasfer and indirect, intralingual, non-inferencing transfer.

Intralingual Errors

Besides the preponderance of interlingual errors represented by the appearance of the resumptive pronoun in all relativizable positions in English, there were also other types of errors, namely, the intralingual errors. These include overgeneralization of the target language features and simplification of the target language structures. That intralingual factors, more specifically, the inherent difficulty of some types of English relative clauses influenced the Arab ESL learners' English production in this study is supported by the results of the informal interviews with these students.

Overgeneralization

Errors under this category included relative pronoun selection, relative pronoun morphology, and subject-verb agreement. Each of these errors is discussed below with illustrative examples from the corpus.

Errors involving relative pronoun selection were very frequent in the production of Arab ESL learners. In fact, errors of this type occurred in all four tests and involved all three levels of English language proficiency, though to varying degrees (cf. Tables 1-4, Appendix A).

Typical examples are given below:

(7) *John hates whom his brother likes.

(8) *John hates which his brother likes.

(9) *The book who I borrowed from the library is new.

Errors involving wrong selection of relative pronouns occurred in all four tests. This type of error is undoubtedly an intralingual error since Arabic relative pronouns have one underlying base with phonological differences and are not as distinct as English relative pronouns. Consequently, Arab ESL learners encounter difficulty in relative pronoun selection in English. They overgeneralized the use of which for example to include references to human as well as non-human antecedents.

Errors involving relative pronoun morphology are clearly intralingual errors. Arabic relative pronouns are inflected for gender, number, and case in MSA but not in the dialects. These inflections are clearcut and there is no confusion as to what relative pronouns refer to which antecedents. English relative pronouns, on the other hand, are not as distinct as their Arabic counterparts in gender and number. For example, whose and whom can be used with masculine and feminine antecedents as well as singular and plural ones. In addition, there is a controversy over whether to use who or whom in the accusative case. This being the case, it is not surprising

that Arab ESL learners commit so many errors involving relative pronoun morphology. The source of difficulty is inherent in English. The following is a representative sample:

(10) *The men whom are talking are friends.

(11) *The women whose went to the market came back.

(12) *The boy whom father came here is Samir.

There were cases in which Arab ESL learners thought that who was always singular and consequently overgeneralized its use. Scott and Tucker (1974) indicate that this error can be can be explained by the fact that some learners in their study equated who with the Arabic relative pronoun allaðii which is the singular, masculine relative pronoun in MSA. However, a more plausible explanation for this error is that Arabic relative pronouns have one underlying base with phonological differences. Also, Arab ESL learners in this study thought that whom and whose are relative pronouns always used in the plural form. Example:

(13) *The people who is talking to each other are friends.

Simplification

In addition to the intralingual errors involving overgeneralization, there were other types of errors which occurred as a result of simplification of English forms. Simplification in this study was manifested in the learners' use of simple sentences instead of sentences containing relative clauses and multiple embedding, and the conjoined

clause interpretation of relative clauses. These ways of simplifying English relative clauses are illustrated below.

Many Arab ESL learners found some types of English relative clauses difficult to produce, particularly relative clauses on the lower positions of the NPAH and sentences containing multiple embedding. Consequently, these learners opted for simple sentences instead of relative clauses. Examples:

(14) The son of the teacher is named Ali.

(15) Samir's father came here.

In other instances, Arab ESL learners opted for a sequence of two sentences instead of relative clauses. Examples:

(16) Samir is an engineer. He came to visit us.

(17) John dated the girl. Alice is taller than her.

Another finding which has not been discussed in previous studies is that Arab ESL learners, especially elementary level learners, tend to interpret relative clauses in English as conjoined sentences (see Table 5, Appendix A). This was done in two ways: (a) using the coordinators and and but, (b) using the subordinators after, when, and because. Examples: (a) Coordination

(18) The two boys polite and I talked to them.

(19) Susan wrote a letter to the girl but she never answered her.

(b) Subordination

(20) The boy came back after I gave him the book.

(21) The man bought the car because he is rich.

(22) I saw the two men when they entered the house.

Structural Misrepresentation of Relative Clauses

Another type of error made by the ESL learners in this study can be called structural misrepresentation of English relative clauses (see Table 6, Appendix A). This type of error was pervasive and was found in all four tests. There were specific types of errors that caused difficulty across the board. Structural misrepresentation of relative clauses is exemplified below:

(a) Repetition of the identical NP

(23) *The knife which he cut with the knife is sharp.

(b) Relative clause preposing

(24) *Susan wrote a letter to the girl never answered it.

(c) Incorrect word order

(25) *The knife he cut with which is sharp.

(d) Missing antecedent

(26) *Who studies for the examination succeeds.

(e) Use of the possessive pronoun before the antecedent

(27) *His house which he built is large.

(f) Use of the definite article instead of the relative pronoun

(28) *The man the came here is rich.

(g) Use of personal pronouns instead of the relative pronoun

(29) *I got a friend he speaks Spanish.

(h) Use of possessive pronouns instead of the relative pronoun

(30) *The boy his father is a teacher is Ali.

Structural Reordering of Relative Clauses

Arab ESL learners in this study reordered the structure of English relative clauses in the four tests. Unlike the ungrammatical instances of the structural misrepresentation of relative clauses illustrated above, sentences involving structural reordering were always grammatical. There were four types of structural reordering of relative clauses. These types are similar to those found by Gass (1980). These types are illustrated below:

(a) Substitution of the lexical item for another, usually the polar opposite of an adjective

(31) The woman who is uglier than Selma is Selwa.

(b) Switching the order of the two sentences so as to embed the sentence which was intended as the matrix

(32) John sold the book to the student who came here.

(c) Changing the identical NP

(33) John dated Alice who is taller than the girl.

(d) Changing the syntactic structure of the second sentence

(34) The table on which the book was put is large.

Reinterpretation of Relative Clauses

Arab ESL learners also reinterpreted relative clauses in the four tests. Reinterpretation of English relative clauses in this study seems to be accomplished by paraphrasing

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English relative clause structure as in (35), or because of the incomplete acquisition of the structures involving relativization on the lower levels of the NPAH as in (36):

(35) The son of the teacher is Ali.

(36) Samira is the name of the girl whose brother travelled.

STRATEGIES

From the discussion of the corpus presented thus far, it seems apparent that Arab ESL learners rely on certain strategies in processing English relative clauses. In what follows, a brief discussion of the kinds of strategies that the Arab ESL learners in this study seemed to be using, is presented. Transfer as a strategy in producing relative clauses was discussed in some detail earlier in this paper. In this section, production and perceptual strategies are briefly discussed.

Production Strategies

In addition to the language transfer strategy used by the learners in this study, the Arab ESL learners used other production strategies which are well-documented in the literature. These strategies included overgeneralization and simplification of the target language structures.

Besides the use of overgeneralization and simplification as production strategies Arab ESL learners employed what we can call the Structural Misrepresentation Strategy. This strategy was evident in such errors as the repetition

of the identical NP, relative clause preposing, incorrect word order, missing antecedents, and the use of the definite article, personal pronouns, and possessive pronouns instead of relative pronouns. These types of errors were discussed and illustrated in the previous section. The use of structural misrepresentation as a production strategy is attested in the literature dealing with first language acquisition (cf. Bever, 1970; Klima and Bellugi, 1973; Solan and Roeper, 1981).

Perceptual Strategies

The learners in this study also employed perceptual strategies, which, hitherto, have not been discussed in studies dealing with the acquisition of English relative clauses by Arab ESL learners. That these learners employed perceptual strategies in processing English relative clauses is supported by the results of the informal interviews with these learners.

A prominent perceptual strategy that the Arab ESL learners relied on was the Conjoined Clause Analysis of relative clauses. This perceptual strategy is supported by studies in first language acquisition and also by linguistic theory (cf. Thompson, 1971; Prideaux, 1979; Tavakolian, 1981).

A second perceptual strategy that can be inferred from the interlanguage of the Arab students is what can be called here the Saliency Factor. By this it is meant that

these learners have undoubtedly observed the obvious similarities between English and Arabic in relativization and consequently relied on this similarity as a perceptual strategy in their production of English relative clauses.

The third perceptual strategy that was employed by the subjects in their comprehension of English relative clauses is the NP-V-NP strategy. This perceptual strategy was discussed and illustrated in the previous section where the learners produced simple sentences or sequences of two simple sentences instead of relative clauses. Learners seem to be searching for the NP-V-NP sequence in comprehending English relative clauses.

The fourth perceptual strategy is what can be called here the No Gapping Strategy or the Resumptive Pronoun Strategy. This strategy was manifested in the retention of the resumptive pronoun in all relativizable positions of the NPAH. The retention of the resumptive pronoun was more extensive in the lower (more difficult) levels (see Tables 1-4, Appendix A). There is strong evidence from the data indicating that Arab ESL learners reject the Gapping Strategy in English relative clauses and prefer instead the resumptive pronoun strategy as a perceptual aid in processing English relative clauses.

CONCLUSIONS AND IMPLICATIONS

There is evidence in the findings of this study for several conclusions and implications to be drawn regarding the acquisition of English syntactic structures as exemplified in the acquisition of English relativization by Arab ESL learners.

(1) English relative clauses constitute a major syntactic difficulty for Arab ESL learners. More specifically, the absence of the resumptive pronoun in English relativization, relativization on lower levels of the NPAH, the distinction between restrictive and non-restrictive relative clauses, and multiple embedding are more difficult to master than other relativization features.

(2) Language transfer is a significant factor that should be taken into account if an adequate description of interlanguage performance is to be achieved. Furthermore, there is evidence in this study supporting the characterization of transfer as a linguistic phenomenon that seems to operate on two levels: cognitive and automatization.

(3) A distinction between inferencing transfer which is a direct, interlingual type and non-inferencing transfer which is an indirect, intralingual type, can be made.

(4) There are both interlingual errors as well as intralingual errors in the interlanguage of the Arab ESL learners in this study.

(5) Besides the strategies of overgeneralization

and simplification already known in the field, Arab ESL learners in this study apparently employed perceptual and production strategies that, to my knowledge, have not been discussed in similar studies.

(6) The retention of the resumptive pronoun may be an example of fossilized error which continues to surface in the interlanguage of learners even in very advanced ESL levels.

(7) Any unifactor approach will be inadequate in characterizing the interlanguage of Arab ESL learners. Any adequate account of the process of second language acquisition has to take into account a multifactor approach in which the native language, the target language, and language acquisition universals play complementary and synthesizing roles.

(8) Finally, the findings of thsis study imply that it might be possible to reconcile the conflicting views of behaviorists and cognitivists and thus give new life to the old aspirations of the Contrastive Analysis Hypothesis if our characterization of language transfer proves to be tenable and if language learning is viewed as the development of cognitive ability plus the automatization of language skills.

BIBLIOGRAPHY

Abbott, Gerry. "Towards a More Rigorosus Analysis of Errors." IRAL, 18, 2 (1980), 121-134.

Adams, Marilyn. "Methodology for Examining Second Language Acquisition." In Evelyn Hatch, ed., Second Language Acquisition: A Book of Readings, pp. 277-296. Rowley, Mass.: Newbury House Publishers, 1978.

Bever, Thomas. "The Cognitive Basis for Linguistic Structures." In J. Hayes, ed., Cognition and the Development of Language, pp. 279-362. New York: John Wiley, 1970.

Corder, S.P. "The Significance of Learners' Errors." IRAL, 5 (1967), 161-170.

Dulay, Heidi, and Marina Burt. "Natural Sequences in Child Second Language Acquisition." Language Learning, 24, 1 (1974), 37-53.

Fox, Robert, "Relative Clauses in Three Languages." TESOL Qurterly, 4 (1970), 131-136.

Gass, Susan. "Language Transfer and Universal Grammatical Relations." Language Learning, 29, 2 (1979), 327-344.

Ioup, Georgette, and Anne Kruse. "Interference versus Structural Complexity as a Predictor of Second Language Relative Clause Acquisition." In Proceedings of the Second Language Research Forum, ed. C. Henning. Los Angeles, California, 1977.

Jordens, Peter. "Rules, Grammatical Intuitions, and Strategies in Foreign Language Learning," Interlanguage Studies Bulletin, 2 (1977), 5-76.

Keenan, Edward, and Bernard Comrie. "Noun Phrase Accessibility and Universal Grammar." Linguistic Inquiry, 8 (1977), 63-99.

Kellerman, Eric. "Towards a Characterization of Transfer in Second Language Learning." Interlanguage Studies Bulletin, 2 (1977), 58-146.

Kellerman, Eric. "Transfer and Non-Transfer: Where We Are Now." Studies in Second Language Acquisition, 2, (1979), 37-57.

Klima, Edward, and Ursula Bellugi. "Syntactic Regularities in the Speech of Children." In Charles Ferguson and Dan Slobin, eds., Studies of Child Language Development. pp. 333-353. New York: Holt, Reinhart, and Winston, 1973.

Nemser, William. "Approximative Systems of Foreign Language Learners." IRAL, 9 (1971), 115-123.

Prideaux, Gary. "The Acquisition of Relative Clauses: A Functional Analysis." The Canadian Journal of Linguistics, 24, (1979), 25-40.

Schachter, Jacquelyn. "An Error in Error Analysis." Language Learning, 24, 2 (1974), 205-214.

Schachter, J., A. Tyson, and F. Diffley. "Learners' Intuitions of Grammaticality." Language Learning, 26, 1, (1976), 67-76.

Selinker, Larry. "Language Transfer." General Linguistics, 9 (1969), 67-92.

Scott, Margaret, and G. Richard Tucker. "Error Analysis and English-Language Strategies of Arab Students." Language Learning, 24, 2 (1974), 69-97.

Sharwood-Smith, Mike. "Strategies, Language Transfer, and the Simulations of the Second Language Learner's Mental Operations." Language Learning, 29, 2 (1979), 345-363.

Solan, Lawrence, and Thomas Roeper. "Children's Use of Syntactic Structures in Interpreting Relative Clauses." In Helen Goodluck and Lawrence Solan, eds., Papers in the Structure and Development of Child Language, pp. 107-126. University of Massachusetts Occasional Papers in Linguistics, Vol. 4, 1981.

Tarone, Elaine. "Consciuos Communication Strategies in Interlanguage: A Progress Report." In H. Douglas Brown, Carlos Yorio, and Ruth Crymes, eds., On TESOL '77 pp. 194-203. Washington, D.C.: TESOL, 1977.

Tavakolian, Susan. "The Conjoined-Clause Analysis of Relative Clauses and Other Structures." In Helen Goodluck and Lawrence Solan, eds., Papers in the Structure and Development of Child Language, pp. 44-83. University of Massachusetts Occasional Papers in Linguistics, Vol. 4, 1981.

Thompson, Sandra Annear. "The Deep Structure of Relative Clauses." In David Langendoen and Charles Fillmore, eds., Studies in Linguistic Semantics, pp. 42-62. New York: Holt, Reinhart, and Winston, 1971.

Quirk, Randolph, Sydney Greenbaum, Geoffrey Leech, and Jan Svartvik. A Grammar of Contemporary English. New York: Seminar Press, 1972.

APPENDIX

THE STATISTICAL RESULTS

Table 1

Frequency and Percentage of Errors in the Translation Test

LEVELS	ELEMENTARY (N = 43)			INTERMEDIATE (N = 32)			ADVANCED (N = 27)		
ERROR TYPE	Frequency	Total Usage	Percentage of Error	Frequency	Total Usage	Percentage of Error	Frequency	Total Usage	Percentage of Error
Resumptive Pro. in SU	9	86	10%	3	64	5%	4	54	7%
Resumptive Pro. in DO	16	86	19%	11	63	17%	5	52	10%
Resumptive Pro. in IO	36	82	44%	13	60	22%	5	52	10%
Resumptive Pro. in OBL	57	76	75%	18	57	32%	7	50	14%
Resumptive Pro. in GEN	63	70	90%	27	58	47%	10	50	20%
Resumptive Pro. in O COMP	56	64	88%	44	60	73%	23	49	47%
No Relative Clause	58	500	12%	29	374	8%	5	324	2%
Relative Pro. Omission	18	481	4%	8	352	3%	3	318	1%
Relative Pro. Selection	47	473	10%	17	343	5%	12	315	4%
Preposition Omission	24	215	11%	15	160	9%	17	185	9%

Table 2

Frequency and Percentage of Errors in the Grammaticality Judgment Test

LEVELS	ELEMENTARY (N = 43)			INTERMEDIATE (N = 32)			ADVANCED (N = 27)		
ERROR TYPE	Frequency	Total Usage	Percentage of Error	Frequency	Total Usage	Percentage of Error	Frequency	Total Usage	Percentage of Error
Resumptive Pro. in SU	12	43	28%	6	32	19%	2	27	7%
Resumptive Pro. in DO	13	42	31%	3	32	9%	0	27	0%
Resumptive Pro. in IO	14	42	33%	7	32	22%	3	27	11%
Resumptive Pro. in OBL	23	41	56%	6	31	19%	3	27	11%
Resumptive Pro. in GEN	19	41	46%	11	31	35%	3	27	11%
Resumptive Pro. in O COMP	35	40	88%	22	30	73%	11	27	41%
Relative Pro. Selection	37	40	93%	22	30	73%	14	27	52%
Relative Pro. Morphology	26	40	65%	14	28	50%	3	27	11%
Relative Pro. Omission	37	82	45%	15	60	24%	12	54	22%
Preposition Omission	25	301	8%	15	224	7%	1	189	0.50%
No Relative Clause	45	1010	5%	21	760	3%	1	648	0.15%
Relative Clause Preposing	23	41	56%	10	31	32%	11	27	41%
Subject-Verb Agreement	30	43	70%	9	30	30%	3	27	11%
Repetition of Identical NP	12	42	29%	2	32	6%	0	26	0%
Adjacency	81	86	95%	48	62	77%	37	53	70%
Incorrect Word Order	33	80	41%	8	62	13%	4	52	8%
Use of Possessives with Antec.	37	42	88%	25	29	86%	22	27	81%
Use of Pronominal Relativizer	24	42	57%	8	30	27%	4	27	15%
Use of Def. Art. for Rel. Pro.	11	40	28%	6	30	20%	0	27	0%
Missing Antecedent	72	80	90%	42	59	71%	36	50	72%
Restrictive/Non-restrict. R.C.	41	43	95%	27	29	93%	19	25	76%
Multiple Embedding	29	35	89%	24	28	86%	21	24	88%

Table 3

Frequency and Percentage of Errors in the Sentence Combining Task

LEVELS	ELEMENTARY (N = 43)			INTERMEDIATE (N = 32)			ADVANCED (N = 27)		
ERROR TYPE	Frequency	Total Usage	Percentage of Error	Frequency	Total Usage	Percentage of Error	Frequency	Total Usage	Percentage of Error
Resumptive Pro. in SU	0	86	0%	0	64	0%	1	54	2%
Resumptive Pro. in DO	10	86	12%	3	64	5%	1	54	2%
Resumptive Pro. in IO	10	84	12%	4	62	6%	1	52	2%
Resumptive Pro. in OBL	15	80	19%	6	60	10%	2	52	4%
Resumptive Pro. in GEN	18	82	22%	12	58	21%	3	52	6%
Resumptive Pro. in O COMP	22	80	28%	24	60	40%	9	52	17%
No Relative Clauses	18	508	4%	5	380	1%	7	324	2%
Relative Pro. Selection	39	514	8%	5	380	1%	7	324	2%
Preposition Omission	9	215	4%	2	160	1%	4	135	3%
Relative Pro. Omission	35	510	7%	23	380	6%	5	322	2%
Repetition of Identical NP	68	508	13%	24	382	6%	4	324	1%

Table 4

Frequency and Percentage of Errors in the Multiple Choice Test

LEVELS	ELEMENTARY (N = 43)			INTERMEDIATE (N = 32)			ADVANCED (N = 27)		
ERROR TYPE	Frequency	Total Usage	Percentage of Error	Frequency	Total Usage	Percentage of Error	Frequency	Total Usage	Percentage of Error
Resumptive Pro. in OBL	19	43	44%	10	32	31%	1	27	4%
Resumptive Pro. in GEN	26	43	60%	8	30	25%	3	27	11%
Resumptive Pro. in O COMP	38	43	88%	21	31	68%	7	27	26%
Relative Pro. Selection	23	40	58%	12	32	38%	4	27	15%
Relative Pro. Morphology	19	38	50%	8	28	29%	2	27	7%
Omission of Relative Pro.	22	80	28%	7	64	11%	3	54	6%
Restrictive/Non-restrict. R.C.	57	78	73%	42	62	68%	39	54	72%
Subject-Verb Agreement	9	41	22%	3	30	10%	0	27	0%
Word Order	22	42	52%	6	31	19%	4	27	15%
Relative Clause Preposing	26	42	62%	14	30	47%	10	27	37%

Table 5

Frequency and Percentage of the Conjoined Clause Analysis of Relative Clauses

TESTS	ELEMENTARY (N = 43)			INTERMEDIATE (N = 32)			ADVANCED (N = 27)		
	Frequency	Total Usage	Percentage of Error	Frequency	Total Usage	Percentage of Error	Frequency	Total Usage	Percentage of Error
TRANSLATION	31	510	6%	11	376	3%	5	322	2%
GRAMMATICALITY JUDGMENT	73	1022	7%	37	760	5%	14	644	2%
SENTENCE COMBINING	87	506	17%	52	378	14%	7	324	2%
MULTIPLE CHOICE	21	512	4%	12	376	3%	3	324	1%

Table 6

Frequency and Percentage of Structural Misrepresentation of Relative Clauses

TESTS	ELEMENTARY (N = 43)			INTERMEDIATE (N = 32)			ADVANCED (N = 27)		
	Frequency	Total Usage	Percentage of Error	Frequency	Total Usage	Percentage of Error	Frequency	Total Usage	Percentage of Error
TRANSLATION	72	510	14%	48	376	13%	38	324	12%
GRAMMATICALITY JUDGMENT	215	1022	21%	163	760	21%	67	648	10%
SENTENCE COMBINING	64	508	13%	47	378	12%	18	324	6%
MULTIPLE CHOICE	38	512	7%	26	376	7%	12	324	4%

Table 7

Frequency and Percentage of Structural Reordering of Relative Clauses

TESTS	ELEMENTARY (N = 43)			INTERMEDIATE (N = 32)			ADVANCED (N = 27)		
	Frequency	Total Usage	Percentage of Error	Frequency	Total Usage	Percentage of Error	Frequency	Total Usage	Percentage of Error
TRANSLATION	81	510	16%	56	376	15%	21	322	6%
GRAMMATICALITY JUDGMENT	106	1022	10%	77	760	10%	35	644	5%
SENTENCE COMBINING	145	508	29%	84	378	22%	24	324	7%
MULTIPLE CHOICE	48	512	9%	32	376	9%	10	324	3%